```
RRRRRRRRRRR      UUU          UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRR          RRR UUU          UUU  NNN         NNN  000         000  FFF              FFF
RRR          RRR UUU          UUU  NNN         NNN  000         000  FFF              FFF
RRR          RRR UUU          UUU  NNN         NNN  000         000  FFF              FFF
RRR          RRR UUU          UUU  NNNNNN      NNN  000         000  FFF              FFF
RRR          RRR UUU          UUU  NNNNNN      NNN  000         000  FFF              FFF
RRR          RRR UUU          UUU  NNNNNN      NNN  000         000  FFF              FFF
RRRRRRRRRRRR     UUU          UUU  NNN  NNN    NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN  NNN    NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN  NNN    NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRR    RRR       UUU          UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR    RRR       UUU          UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR    RRR       UUU          UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR       RRR    UUU          UUU  NNN         NNN  000         000  FFF              FFF
RRR       RRR    UUU          UUU  NNN         NNN  000         000  FFF              FFF
RRR       RRR    UUU          UUU  NNN         NNN  000         000  FFF              FFF
RRR          RRR UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR          RRR UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR          RRR UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR          RRR UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR          RRR UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
```

FILEID**DLE

```
DDDDDDDD    LL          EEEEEEEEEE
DDDDDDDD    LL          EEEEEEEEEE
DD      DD  LL          EE
DD      DD  LL          EE
DD      DD  LL          EE
DD      DD  LL          EE
DD      DD  LL          EEEEEEEE
DD      DD  LL          EEEEEEEE
DD      DD  LL          EE
DD      DD  LL          EE
DD      DD  LL          EE              ....
DD      DD  LL          EE              ....
DDDDDDDD    LLLLLLLLLL  EEEEEEEEEE      ....
DDDDDDDD    LLLLLLLLLL  EEEEEEEEEE      ....


LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
;     1          0001  0 MODULE DLE (    !
;     2          0002  0                 IDENT = 'V04-000'
;     3        P 0003  0 %BLISS32[,
;     4        P 0004  0         ADDRESSING_MODE(EXTERNAL=LONG_RELATIVE,NONEXTERNAL=LONG_RELATIVE)
;     5          0005  0         ]
;     6          0006  0                 ) =
;     7          0007  1 BEGIN
;     8          0008  1 !
;     9          0009  1 !**************************************************************************
;    10          0010  1 !*                                                                        *
;    11          0011  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                               *
;    12          0012  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                 *
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;    21          0021  1 !*                                                                        *
;    22          0022  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
;    23          0023  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
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;    25          0025  1 !*                                                                        *
;    26          0026  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
;    27          0027  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
;    28          0028  1 !*                                                                        *
;    29          0029  1 !*                                                                        *
;    30          0030  1 !**************************************************************************
;    31          0031  1 !
;    32          0032  1 !++
;    33          0033  1 ! FACILITY:      DSR (Digital Standard RUNOFF) / DSRPLUS
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT: Processes the .DISPLAY ELEMENTS command.
;    36          0036  1 !
;    37          0037  1 !
;    38          0038  1 ! ENVIRONMENT: Transportable
;    39          0039  1 !
;    40          0040  1 ! AUTHOR: R.W.Friday     CREATION DATE: May, 1979
;    41          0041  1 !
```

```
;    43          0042  1 %SBTTL 'Revision History'
;    44          0043  1 !
;    45          0044  1 ! MODIFIED BY:
;    46          0045  1 !
;    47          0046  1 !       002     KFA00002        Ken Alden       07-Mar-1983
;    48          0047  1 !               Global edit of all modules. Updated module names, idents,
;    49          0048  1 !               copyright dates. Changed require files to BLISS library.
;    50          0049  1 !
;    51          0050  1 !--
```

```
;    53          0051  1 %SBTTL 'Module Level Declarations'
;    54          0052  1 !
;    55          0053  1 ! TABLE OF CONTENTS:
;    56          0054  1 !
;    57          0055  1
;    58          0056  1 !
;    59          0057  1 ! INCLUDE FILES:
;    60          0058  1 !
;    61          0059  1
;    62          0060  1 LIBRARY 'NXPORT:XPORT';                 ! XPORT Library
;    63          0061  1 REQUIRE 'REQ:RNODEF';                   ! RUNOFF variant definitions
;    64          0192  1
;    65        U 0193  1 %IF DSRPLUS %THEN
;    66        U 0194  1 LIBRARY 'REQ:DPLLIB';                 ! DSRPLUS BLISS Library
;    67          0195  1 %ELSE
;    68          0196  1 LIBRARY 'REQ:DSRLIB';                   ! DSR BLISS Library
;    69          0197  1 %FI
;    70          0198  1
;    71          0199  1 !
;    72          0200  1 ! MACROS:
;    73          0201  1 !
;    74          0202  1
;    75          0203  1 !
;    76          0204  1 ! EQUATED SYMBOLS:
;    77          0205  1 !
;    78          0206  1
;    79          0207  1 !
;    80          0208  1 ! OWN STORAGE:
;    81          0209  1 !
;    82          0210  1
;    83          0211  1 !
;    84          0212  1 ! EXTERNAL REFERENCES:
;    85          0213  1 !
;    86          0214  1 EXTERNAL
;    87          0215  1     LSTCHR : REF VECTOR,
;    88          0216  1     LSTCNT : REF COUNTED_LIST,
;    89          0217  1     LSTLCH : REF VECTOR,
;    90          0218  1     LSTRCH : REF VECTOR,
;    91          0219  1     LSTLDD : REF VECTOR,
;    92          0220  1     FS01 : FIXED_STRING,
;    93          0221  1     IRA : FIXED_STRING;
;    94          0222  1
;    95          0223  1 EXTERNAL ROUTINE
;    96          0224  1     GETDD,
;    97          0225  1     GETQC,
;    98          0226  1     GETQS,
;    99          0227  1     RSKIPS,
;   100          0228  1     SKPSEP;
```

```
;  102     0229  1 GLOBAL ROUTINE DLE (HANDLER) : NOVALUE =        !
;  103     0230  1
;  104     0231  1 !++
;  105     0232  1 ! FUNCTIONAL DESCRIPTION:
;  106     0233  1 !
;  107     0234  1 !       See the ABSTRACT for a general description.
;  108     0235  1 !
;  109     0236  1 ! FORMAL PARAMETERS:
;  110     0237  1 !
;  111     0238  1 !       HANDLER is a dummy parameter passed for conformance only.
;  112     0239  1 !
;  113     0240  1 ! IMPLICIT INPUTS:
;  114     0241  1 !
;  115     0242  1 !
;  116     0243  1 ! IMPLICIT OUTPUTS:     None
;  117     0244  1 !
;  118     0245  1 ! ROUTINE VALUE:
;  119     0246  1 ! COMPLETION CODES:     None
;  120     0247  1 !
;  121     0248  1 ! SIDE EFFECTS: None
;  122     0249  1 !
;  123     0250  1 !--
;  124     0251  1
;  125     0252  2     BEGIN
;  126     0253  2     LOCAL
;  127     0254  2         DISPLAY_CODE,
;  128     0255  2         GETDD_RESULT,
;  129     0256  2         GETQC_RESULT;
;  130     0257  2
;  131     0258  2     !Turn off bulleting (if any) so that this command takes precedence.
;  132     0259  2     LSTCHR [.LSTCNT [CL_INDEX] - 1] = 0;
;  133     0260  2
;  134     0261  2     !Skip spaces and tabs before the first display descriptor.
;  135     0262  2     RSKIPS (IRA);
;  136     0263  2
;  137     0264  2     !Attempt to get a character enclosed in quotes
;  138     0265  2     GETQC_RESULT = GETQC ();
;  139     0266  2
;  140     0267  2     !Quit if an error occurred.
;  141     0268  2     IF  .GETQC_RESULT EQL -2
;  142     0269  2     THEN
;  143     0270  2         RETURN;
;  144     0271  2
;  145     0272  2         !If anything quoted was specified, save it
;  146     0273  2         IF .GETQC_RESULT NEQ -1
;  147     0274  2         THEN
;  148     0275  2             LSTLCH [.LSTCNT [CL_INDEX] - 1] = .GETQC_RESULT;
;  149     0276  2
;  150     0277  2         !Now attempt to get a display descriptor.
;  151     0278  2         !First skip a separator
;  152     0279  2         SKPSEP (IRA);
;  153     0280  2         !Now get a descriptor and save it.
;  154     0281  2         CASE GETDD(DISPLAY_CODE) FROM -1 TO +1 OF
;  155     0282  2             SET
;  156     0283  2
;  157     0284  2             [-1]:
;  158     0285  2                 !Quit if command was in error.
```

```
;  159     0286  2                    RETURN;
;  160     0287  2
;  161     0288  2                [0]:
;  162     0289  2                    !Do nothing if nothing supplied
;  163     0290  2                    0;
;  164     0291  2
;  165     0292  2                [+1]:
;  166     0293  2                    !Save descriptor
;  167     0294  2                    LSTLDD [.LSTCNT [CL_INDEX] - 1] = .DISPLAY_CODE;
;  168     0295  2
;  169     0296  2                TES;
;  170     0297  2
;  171     0298  2        !Skip parameter separator, to try and get the next quoted character.
;  172     0299  2        SKPSEP (IRA);
;  173     0300  2
;  174     0301  2        !Now try to get another character enclosed in quotes.
;  175     0302  2        GETQC_RESULT = GETQC ();
;  176     0303  2
;  177     0304  2        !Quit if an error, or nothing supplied
;  178     0305  3        IF  (.GETQC_RESULT EQL -2)
;  179     0306  3            OR (.GETQC_RESULT EQL -1)
;  180     0307  2        THEN
;  181     0308  2            RETURN;
;  182     0309  2
;  183     0310  2        !User said something, so save it.
;  184     0311  2        LSTRCH [.LSTCNT [CL_INDEX] - 1] = .GETQC_RESULT;
;  185     0312  2
;  186     0313  1        END;                            !End of DLE


                                                .TITLE  DLE
                                                .IDENT  \V04-000\

                                                .EXTRN  LSTCHR, LSTCNT, LSTLCH
                                                .EXTRN  LSTRCH, LSTLDD, FS01
                                                .EXTRN  IRA, GETDD, GETQC
                                                .EXTRN  GETQS, RSKIPS, SKPSEP

                                                .PSECT  $CODE$,NOWRT,2

                                 007C 00000     .ENTRY  DLE, Save R2,R3,R4,R5,R6                ; 0229
                    56 00000000G EF   9E 00002  MOVAB   SKPSEP, R6                              ;
                    55 00000000G EF   9E 00009  MOVAB   GETQC, R5                               ;
                    54 00000000G EF   9E 00010  MOVAB   IRA, R4                                 ;
                    53 00000000G EF   9E 00017  MOVAB   LSTCNT, R3                              ;
                    5E           04   C2 0001E  SUBL2   #4, SP                                  ;
                    50           63   D0 00021  MOVL    LSTCNT, R0                             ; 0259
                    50       04  A0   D0 00024  MOVL    4(R0), R0                              ;
                    50 00000000GFF40   DE 00028  MOVAL   @LSTCHR[R0], R0                       ;
                        FC       A0   D4 00030  CLRL    -4(R0)                                 ;
                                 54   DD 00033  PUSHL   R4                                    ; 0262
00000000G           EF           01   FB 00035  CALLS   #1, RSKIPS                            ;
                    65           00   FB 00038  CALLS   #0, GETQC                             ; 0265
                    52           50   D0 0003F  MOVL    R0, GETQC_RESULT                       ;
FFFFFFFE            8F           52   D1 00042  CMPL    GETQC_RESULT, #-2                      ; 0268
                                 7C   13 00049  BEQL    5$                                     ;
FFFFFFFF            8F           52   D1 0004B  CMPL    GETQC_RESULT, #-1                      ; 0273
```

```
                                        13   13 00052            BEQL    1$                              ;
                      50                63   D0 00054            MOVL    LSTCNT, R0                      ; 0275
                      50          04    A0   D0 00057            MOVL    4(R0), R0                       ;
                      50 00000000GFF40      DE 0005B             MOVAL   @LSTLCH[R0], R0                 ;
              FC      A0                52   D0 00063            MOVL    GETQC_RESULT, -4(R0)            ;
                                        54   DD 00067 1$:        PUSHL   R4                              ; 0279
                      66                01   FB 00069            CALLS   #1, SKPSEP                      ;
                                        5E   DD 0006C            PUSHL   SP                              ; 0281
         00000000G    EF                01   FB 0006E            CALLS   #1, GETDD                       ;
      02 FFFFFFFF     8F                50   CF 00075            CASEL   R0, #-1, #2                     ;
    0007             001A             004A      0007D 2$:        .WORD   5$-2$,-                         ;
                                                                         4$-2$,-                         ;
                                                                         3$-2$                           ;
                                             04 00083            RET                                     ; 0286
                      50                63   D0 00084 3$:        MOVL    LSTCNT, R0                      ; 0294
                      50          04    A0   D0 00087            MOVL    4(R0), R0                       ;
                      50 00000000GFF40      DE 0008B             MOVAL   @LSTLDD[R0], R0                 ;
              FC      A0                6E   D0 00093            MOVL    DISPLAY_CODE, -4(R0)            ;
                                        54   DD 00097 4$:        PUSHL   R4                              ; 0299
                      66                01   FB 00099            CALLS   #1, SKPSEP                      ;
                      65                00   FB 0009C            CALLS   #0, GETQC                       ; 0302
                      52                50   D0 0009F            MOVL    R0, GETQC_RESULT                ;
         FFFFFFFE     8F                52   D1 000A2            CMPL    GETQC_RESULT, #-2               ; 0305
                                        1C   13 000A9            BEQL    5$                              ;
         FFFFFFFF     8F                52   D1 000AB            CMPL    GETQC_RESULT, #-1               ; 0306
                                        13   13 000B2            BEQL    5$                              ;
                      50                63   D0 000B4            MOVL    LSTCNT, R0                      ; 0311
                      50          04    A0   D0 000B7            MOVL    4(R0), R0                       ;
                      50 00000000GFF40      DE 000BB             MOVAL   @LSTRCH[R0], R0                 ;
              FC      A0                52   D0 000C3            MOVL    GETQC_RESULT, -4(R0)            ;
                                             04 000C7 5$:        RET                                     ; 0313

; Routine Size:  200 bytes,    Routine Base:  $CODE$ + 0000


;   187          0314  1 END                          !End of module
;   188          0315  0 ELUDOM




;                              PSECT SUMMARY
;
;     Name                         Bytes                         Attributes
;
;  $CODE$                                200  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)


;                          Library Statistics
;
;                                           -------- Symbols --------      Pages       Processing
;     File                                  Total     Loaded   Percent      Mapped      Time
;
```

```
;  _$255$DUA28:[SYSLIB]XPORT.L32;1          590        0        0      252       00:00.1
;  _$255$DUA28:[RUNOFF.SRC]DSRLIB.L32;1    1248        3        0       86       00:00.3




;                                   COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:DLE/OBJ=OBJ$:DLE MSRC$:DLE/UPDATE=(ENH$:DLE)

; Size:         200 code + 0 data bytes
; Run Time:         00:04.0
; Elapsed Time:     00:15.6
; Lines/CPU Min:     4701
; Lexemes/CPU-Min: 10119
; Memory Used:  49 pages
; Compilation Complete
```

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